

ABSTRACT

A system and method employing pre- and/or post- condition(s) specified at a source code level and persisted (*e.g.*, in associated object code and/or a specification repository) facilitating static checking of the object code is provided. The system and method are based, at least in part, upon a framework that employs rules for using an interface to be recorded as declarative specifications in an existing language.

The system can employ a range of annotations that allow a developer to specify interface rule(s) with varying precision. At the simplest end of the range, a specifier can mark those methods that allocate and release resource(s). A specifier can also limit the order in which an object's methods may be called to the transitions of a finite state machine. At the more complex end of the range, a specifier can give a method a plug-in pre- and post condition, which is arbitrary code that examines an object's current state and a static approximation of the method's actuals, decides whether the call is legal and returns the object's state after the call.